

ABSTRACT

An object of the present invention is to provide a structure of a metal collecting material for use in 5 seawater or river water or industrial wastewater to give the most excellent adsorption efficiency. Another object of the present invention is to provide a process for efficiently separating and recovering valuable metals or noxious metals from a metal collecting material having 10 collected said valuable metals from seawater or noxious metals from river water or wastewater with the least possible waste generation.

A metal collector according to an aspect of the present invention is formed by stacking at least partially 15 alternate layers of a fibrous metal collecting material with a spacer for introducing a liquid to be treated into said collecting material, wherein the area of spacer side faces represents 25-75% of the total area of collecting material side faces and spacer side faces in the side faces 20 of the stack. A process for eluting and recovering a metal from a metal collecting material according to another aspect of the present invention comprises the steps: (1) contacting the metal collecting material having absorbed a metal with a dilute eluent, (2) contacting the metal 25 collecting material with an eluent more concentrated than in step 1 to recover the metal into the eluent; and (3) contacting a metal resorbing material with the eluate from step 2 to resorb the metal.